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ABSTRACT

The impact of basic skill developmental programs on student success in career programs was investigated. Data collected from 61 two-year institutions provided the basis for selection of six survey sites. At each site, random samples of students in their initial enrollment in developmental programs, students previously enrolled in developmental studies, and students never enrolled in developmental studies filled out questionnaires, standardized instruments, and participated in in-person interviews. Success or non-success of developmental students was defined for study purposes as academic eligibility to continue in a study program. Findings indicated that developmental programs with the greatest impact were those with sufficient flexibility to give students individual attention. Successful students valued goal orientation and recognition more highly than non-successful students. Success appeared related to students' conformity and negatively to their value of variety. The question of student commitment also emerged as significant. Successful students exhibited firm career goals, and their program choices were based on personal inclination rather than external influences. Guide questions in six program areas were developed on the basis of the findings to assist counselors in identifying local program standards for developmental studies. (TR)

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NON-TRADITIONAL STUDENT CHARACTERISTICS ASSOCIATED WITH SUCCESS IN POST-SECONDARY CAREER PROGRAMS: IMPLICATIONS FOR COUNSELING

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ASSOCIATED WITH SUCCESS IN POST-SECONDARY CAREER PROGRAMS:
IMPLICATIONS FOR COUNSELING

Introduction

During recent years, greater and greater numbers of students entering two-year college programs may be classified as "non-traditional". Not long ago the term "non-traditional" usually referred to the economically and/or educationally disadvantaged students entering through "open-door" policies. Of late, non-traditional has been used to describe a multiplicity of student groups including women and working adults seeking a career change or an updating of employment skills, citizens of the community sampling the expanding offerings of the two-year college or individuals responding to an educational consciousness heretofore not sensed. The wider availability of monetary support through social and educational agencies is instrumental in making college a feasible alternative for many students previously unable to attend. A common felt need of many of the non-traditional students is the acquisition of basic "survival skills" in order to function effectively in career programs. The numbers of students needing these special services have increased dramatically.

Institutions recognized the student needs for educational experiences of a remedial, developmental or supportive nature which increase chance of success in academic and career pursuits. This institutional recognition has given rise to a variety of program efforts that are often referred to as developmental studies.

In planning this study of developmental studies programs, the first problem became one of definition: What constitutes a developmental studies program? In the broadest sense, all instruction and service programs that provide remedial, compensatory or developmental emphasis for the purpose of assisting students to succeed in educational endeavors could be included. This view, being as broad in scope as it is, could be applied to virtually any student with any type of weakness relevant to their educational endeavors. In practical usage, this wide ranging group of services is usually offered only to those students who are considered to be "educationally disadvantaged".

In approaching the question of definition, a systematic review of the literature revealed that institutional responses of two-year colleges have been as varied as the demands. While some two-year colleges have independent developmental studies programs offering a "block" of courses

and selected faculty assigned to teach them, other colleges integrate their developmental instruction into regular academic department offerings. Some institutions offer summer workshops or a core or small block of two or three courses designed to prepare the student for work in regular college courses. Variances were also found in the approaches utilized for the selection of students, methods of teaching, content of programs and evaluative efforts. A more thorough review of literature is discussed elsewhere.[1]

Because of the wide variation in developmental studies programs among two-year colleges, the following definition was formulated for use in the project:

> Developmental Studies Programs are organized educational efforts to provide a range of learning experiences intended to ameliorate educational skill and attitude deficiencies of students in career programs.

The focus of the study was to determine the impact of these basic skill programs to the success of students in career programs. In making this determination, four basic questions emerged as critical:

- What are the characteristics of the students enrolled in developmental studies programs?
- Of what do these developmental programs consist and how are they organized?
- Why do some students who have had a developmental studies experience achieve academic or career success while others do not?
- Are there crucial aspects to developmental or remedial efforts that impinge on student success that may be identified as or as leading to program standards?

These and other related questions served to guide the methods and procedures utilized in the study.

Summary of Methods and Procedures

The need to collect basic information for a description of the state-of-the-art of developmental programs in the two-year institutions of New York State resulted in the collection of data during the first cycle of the project. The primary technique utilized was a state-wide mail survey by a questionnaire packet.

The instrument package was disseminated to the developmental program administrator at 61 two-year institutions offering occupational courses of study. Included were six Agricultural and Technical Colleges, eight private colleges, thirty-six community colleges and ten Economic Opportunity Centers. The responses from the 58% return were synthesized by a preliminary analysis which provided an information base for the document entitled "Overview - Developmental Studies for Occupational Students - A Sourcebook for Post-Secondary Programs".

Subsequent analysis of survey data employed cross tabulation or contingency table analysis and application of the chi-square test of significance in order to identify associations among various environmental and programmatic variables. This analysis is reported elsewhere[2] in detail. The outcomes of these analyses, plus the concerns outlined in the sourcebook provided the framework for the second cycle of the project.

Reflecting these emergent concerns and questions, the following equation conceptualizes the research focus:

Dependent Variable		*Independent Variables*
Student Successes	=	*Environmental +*
		Programmatic +
		Cognitive +
		Affective

Student success was defined as being eligible to continue in the program or course of study, or a conscious informed career decision made to change or leave the present program. Data relevant to the independent variables included faculty/staff attitudes, student characteristics, values and attitudes, instructor success predictions, the value and impact of developmental efforts and program specifics.

First year findings indicated that developmental programs had four broad approaches: block-scheduling, learning/skill centers, designated courses and integrated teaching. The first three approaches were utilized in over 90% of the institutions in some combination. Because of its limited use and lack of programmatic parameters, the integrated teaching category, defined as a conscious effort to provide remedial/developmental instruction within regular course offerings, was not emphasized in the second cycle effort.

Survey results indicated that the range of student needs and backgrounds were represented by six institutional categories:

- *an Agricultural and Technical College that primarily serves a rural and lower SES population;*

-an Agricultural and Technical College that primarily serves a suburban and middle to upper SES population;

-an upstate community college that primarily serves a rural local population;

-an upstate community college that primarily serves an urban broadly-based population;

-an urban community college that primarily serves an inner-city minority population; and

-a private urban two-year institution that serves an urban broadly-based population.

The combination of institutional categories and their primary clientele plus the programmatic approach to developmental efforts served as rationale for selection of the six sites at which to research the impact of these programs to students in career programs. A final but most critical criteria was the willingness of staff and college to serve as a cooperating research site and be part of the effort. The primary data source of the second research cycle was determined as students with a cognitive-affective emphasis in contrast to the first year which drew its information from staff members involved in developmental programs and focused on environment and program.

The research methodology for the second year included data collection by questionnaires and standardized instruments from developmental and non-developmental students and staff during the last half of the first semester. The same instruments were utilized with developmental students, and when appropriate with non-developmental students, on a pre-post basis during the second semester. In the early spring, interviews were held with a representative sample of developmental students and with developmental staff.

The following groups were requested at each site in order to approximate a longitudinal examination of developmental students and to make comparisons:

-a random sample of students in their initial enrollment in developmental studies, fall and incoming for spring.

-a random sample of students previously enrolled in developmental studies.

-a random sample of students never enrolled in developmental studies to serve as a comparison group.

In all cases, the students comprising these groups were primarily those enrolled in occupational education programs or in pre-programs for career programs.

In order to determine instrumentation needs for collection of appropriate data, a review of standardized instrumentation was completed. The Inventory of Personal Values and the Inventory of Interpersonal Values[3] were selected as standardized techniques to determine value factors such as goal orientation, achievement, variety and conformity. A student questionnaire was developed specific to project emphases with one form appropriate to developmental students and an adapted form for non-developmental students.

In order to obtain inputs from faculty, a reaction sheet was composed for developmental staff and non-developmental staff. The purpose of these forms was two-fold. In addition to information and reactions, a pool of descriptors and words were collected and utilized in the development of a faculty success Predictor Scale for developmental students.

Interview schedules were developed for use in individual student interviews and small group developmental faculty interviews. The data collection plan was outlined and implemented through the cooperation of the developmental staff members at the six sites.

In the first semester, 318 students enrolled in developmental programs at the six sites and 140 non-developmental students at four sites completed the instruments midway through the term. The non-developmental students served as a comparison group. During the second semester 106 initial enrollment developmental students and 36 non-developmental students completed the instruments on a pre-post basis.

In order to obtain data that could not be provided by questionnaire and standardized instruments, a student interview schedule was designed to seek opinions on college commitment, career commitment, self-perceptions as a student, and the carry-over power of developmental instruction to regular program courses. These five broad areas of the interview schedule provided basic data for the subsequent rating of will to succeed or motivation, vocational goal orientation and perceived impact of developmental program. The actual responses to interview items were categorized and used as rating criteria by the three interviewers.

Individual interviews were completed with a sample of 116 developmental students at five of the six sites. The intent was to base the interview sample on developmental students who had previously responded to the questionnaire in the first semester and who now were fully enrolled in their career programs. The availability of these students and the problems of scheduling resulted in the interviewing of some students who had not previously completed the questionnaire and inventories. In statistical comparison (t test) of the interviewed group with the total sample of

developmental students, no significant differences were determined, except that a greater number of minorities were interviewed than expected. The interviewees therefore are assumed to be a representative sample of the larger group.

After tabulation the data were analyzed to determine significant relationships, predictive values and profile information through cross tabulation, contingency table analysis and chi-square test of significance, Pearson R correlations and correlation matrixes, T values for significance, multiple regression (SPSS), frequencies, means and percentages.[4]

Conclusions

It is important to continually recognize that, for a variety of reasons, developmental studies programs for occupational education students vary widely from college to college. Most differences stem from judgments of professional staff during the historical evolution of programs rather than the acceptance of a particular educational philosophy. The term developmental studies has different meanings among staff members who work in the program area. Remediation is involved, as is updating or reorientation to instructional kinds of experiences. Across colleges, programs are both a total semester's work and segmented. Some aspects may even be termed compensatory. Students are older and younger, disadvantaged and non-disadvantaged. The general goal of developmental studies appears to be one of providing additional help for students that will enhance the possibility of success in their chosen field of study.

Definitions of developmental studies vary in accordance with the structure and components of the program. The inclusive definition offered as part of the first cycle of research remains appropriate and acceptable as stated program intents, both specific and general, are compatible with and underscore its validity as an acceptable basic definition.

It should be recognized that these kinds of programs are designed for a small number of students. Indeed they constitute a group of students whose participation in college is questioned by many professional educators. At the same time, however, the mission of the two-year college is sufficiently unique that it is completely justified in providing some kinds of assistance to students in the upgrading of basic skills. The dimension that no program can guarantee is that of causing a process of learning to occur. That the students must do through involvement and motivation.

As found in the statewide survey (1976), program designs do differ among institutions. Within these differences the common concern exists -- cognitive and affective student basic skills. Students with these needs and others have been broadly termed non-traditional. Student differences in age, perspective, needs and motives constitute diversity far more than geographical location, institutional size or program approach. The success of these students needing developmental programs emerges from a combination of basic skills and drive or motivation to succeed. The skill component is largely made up of academic survival skills. Drive or motivation is a collection of intangibles that admittedly are difficult to identify, and vary among students.

Non-traditional students who make up a large proportion of clientele in developmental programs are older than traditional two-year college students. Their motive for returning to college is often economic, a seeking to upgrade employability skills and status. The availability of monetary support through social and educational agencies is instrumental in making college a feasible alternative for many who previously would not have considered it. These older and returning students, many of whom are women, value and want developmental program offerings. They perceive them as a desirable orientation, entry phase or refresher to academic pursuits which provides both attitudinal and skill development.

Somewhat conversely, younger students, those entering directly from high school into developmental offerings, generally do not perceive these programs as critical to their pursuits. Rather, they view the developmental programs as repetitions of high school studies and many exhibit indifference toward what they perceive as non-college studies. A minority of these students also express disappointment or dismay for being judged marginal before the fact.

The effectiveness of any program can be best determined through examination of its impact at the student level. In this effort student success has been defined as being eligible to continue in a program, or to make a conscious informed career decision to change or leave the program.

To evaluate any program, there must be identification of the variables active in a situation. As in most instructional programs, there are groups of variables that, in different situations with different students, interact in diverse ways. There is no one best set of conditions that is universally true. This research has sought generalities that could be seen as strong clues for local verification in the specific program and student context.

Student-centered variables can be divided into two major groups: skill and drive or cognitive and affective. Either set can compensate for deficiencies in the other. Programs generally focus on academic skills but motivation or drive is also seen as important if not primary for some students. One must apply effort to increase skills, or more basic,

one must have the will to apply existing skills. In many cases, a student is in fact judged on an application of effort more than the quality of the interim product of the effort from the perspective that if a student will develop the habit of continuing to try, the chances for success in later program studies are significantly increased.

Cognitive and Affective Variables - Students. The success or non-success of developmental students is defined in this project as the academic eligibility to continue a program of studies or to consciously decide to change program or college plans.

At the conclusion of the academic year, the grade point average and academic status were collected as success criteria for the developmental students who had responded to survey instruments and/or had been interviewed. For the fall students, these criteria represented two semesters of college work and for the spring students, one semester. A percentage summary of the academic status of the students describes the proportion of successful and non-successful students included in the research sample:

Fall Entrants	Spring Entrants
72.7% academic success	60.2% academic success
24.6% academic failure	34.1% academic failure
2.7% withdrew	5.7% withdrew

In attempt to determine factors that are characteristic of successful developmental students, the affective, attitudinal, will or drive aspect was examined by a number of techniques. Data from the SRA Inventories indicate that succsssful developmental students held somewhat different values than non-successful students. Successful students strongly valued goal orientation and recognition and to a lesser degree independence. The valuing of leadership and support was inconsistent but significant. They consistently do not value variety. Conformity was identified as a strong but negative relationship to the success criteria. Success was related to achievement, benevolence, decisiveness and orderliness but in lesser and varying degrees.

The consistency found in the analyses for the values of goal orientation, variety, conformity and recognition in negative and positive relationships to success suggest these as important variables within the affective domain.

In addition to value factors, the question of commitment emerged as significant. The measures for commitment to career, college and/or program were integrated into the questionnaire and interview schedule. Successful students tended to have a firm career goal and the choice of their program and college tended to be based on personal choice rather than due to external influences. The successful student demonstrated a personal commitment to both long range and short term goals. Many of these students were clear in their intentions and this clarity was often based on experience.

The successful students approach the college experience positively. They find their needs being met by both institution and staff. With a career or personal goal as a guide or benchmark, the successful students seek and relate to those people and activities which aid them along their intended course of study and/or career goal.

An indicator or cognitive skill, the reading stanine, was collected at the end of the academic year for each responding student. The reading stanine was a strong factor positively related to academic success. Congruently, successful students identified the skills of reading as an important area of need.

Faculty predictions were highly correlated with student success. Based on categories such as motivation, inquisitiveness, attendance, and goal orientation, faculty can be expected to predict the success of their students prior to mid-term. Data indicate these predictions to be the most consistent variable throughout the analysis.

Environment and Program Variables. The results indicate that environmental variables such as institutional response, geographical location, or student background are less critical than the more specific programmatic components. Data suggests that developmental programs with greatest impact are those with sufficient flexibility to allow students to feel a kind of individual attention. Maximum individualization tends to occur when a skill center or area staffed with qualified professionals is central to the program with courses and supportive services eminating from that locus. The term "center" is used in the broadest sense and denotes a "base of operation". It is more a psychological construct than a physical fact but it provides the central structure necessary for not only formal skill instruction but for attention to individual concerns or problems using other techniques and approaches whether skill-oriented or attitudinal. The "center" or base of operation is both a learning unit and an access to assistance throughout the college years. Individual courses are time oriented and are not available beyond the scheduled semester. The location of the center for developmental work should be such that it is within the natural flow of student traffic. More important is an accepting open attitude of the staff who work there.

The utility of developmental programs increases with the extent of professional supportive interaction that exists between developmental staff and other faculty members. The presence of interaction results in increased respect and acceptance of the program and its contribution to student needs -- often relative to subject content and the necessary skills for academic survival. Peer acceptance and recommendation tends to result in more students taking advantage of devevelopmental offe-ings.

The group of students that are termed non-traditional increasingly constitute a larger percentage of the total student body. They have special needs and are often a good judge of how these needs can be met most effectively.

The selection process for developmental programs appears most satisfactory to students when the choice is theirs, and/or there is an identifiable competency or performance level to be achieved. In both instances, there is a recognition on the part of students that their current academic skills need upgrading. Records and test scores aid faculty in making the most appropriate recommendations. Students generally respect these recommendations and express a desire to improve skills to "survival" levels.

Often recruitment procedures are linked to opportunities for financial supports, such as HEOP, BEOG, or OVR which have targeted c ient groups. The economically disadvantaged are often also educationally disadvantaged. The numbers within these groups are often great enough for required "preparatory" or "extended" skill programs.

Indifference to developmental programs result when the experience is perceived as repetitious to previous educational experience whether the program is preparatory in nature for groups or provided on an individual basis. Known exit standards or competency levels for completing the program are viewed with favor by students, especially when the opportunity to return on an individual basis is recognized in order to obtain additional skill help as needed.

The skills that constitute reading, writing and studying are perceived as most valuable by students. Math is also valued, particularly when mathematics is central to the desired career program. The feeling of "being able to ask for help without fear of put down" was seen by students as critical -- a kind of "safe" home base from which to expand to other courses. As a result of this help, skills improve and confidence increases. Such an atmosphere is created through efforts of full-time professional staff who earn and subsequently build upon respect of other faculty.

The basic question of this effort is what factors are at work that cause some students enrolled in developmental programs to survive or be

successful while others do not. The foregoing summary suggests environmental and programmatic factors that provide a positive and productive base within which these non-traditional students will function most effectively.

Implications

The importance of the counseling function to the success of developmental students has been apparent throughout the analyses of data. The more successful programs have demonstrated that the services of the counseling office provide direct and integrated support to the developmental effort. Student cognitive and affective data have indicated that the SRA value inventories have potential for identifying a profile of factors associated with successful students. Too the feasibility of identifying the strength of college and career commitment has been demonstrated. These present strong implications to counseling in terms of their utility as additional tools or techniques to help the developmental student attain success. Counselor awareness of commitment help in providing the kinds of counseling and related experiences needed to help the less committed find their preferred path.

Other general findings point to the validity of faculty predictions, that environmental and background characteristics are less significant to success than variables found within programs and the affective/cognitive student factors, and that there are more commonalities than differences among developmental students and programs.

The findings of this research can be utilized by local program staff at both the entrance/admission point and during the first semester of instruction. If a more accurate sorting of entrants is desirable, a college could accept students with the characteristics associated with later success. More defensible is the use of these techniques and knowledges in the early identification and prescription of additional services for those students less likely to succeed. Each college is encouraged to determine their own local thresholds of measures such as reading level, goal orientation, value of recognition and career commitment as they exist relative to the configuration of the local program. The data also indicate that programs could be improved by building in more student choice accompanied by knowledgeable advisement and working for greater inter-faculty interaction. While certain generalities have been found, the scope of potential variables is such that any one program with its accompanying number of givens, such as size, funding level or restricted program admissions policies, could dictate the advisability of a different variable mix. While certain ingredients appear to be more important than others, it is a combination of the available factors that will decide the outcome.

The analyses have also suggested statements that can serve as guides in the identification of local program standards for developmental studies. It is evident from the guide questions that a role for counselors exists throughout a comprehensive developmental program for these non-traditional students: specifically in the testing for selection, in the counseling for individual diagnosis/prescription, in the supportive services during the instructional program and in providing follow-up.

The guide questions are presented as a basis from which counselors can formulate the most appropriate responses, in terms of local situations, to the questions of:

- *Should counselors be concerned with these non-traditional students or are they exclusively an instructional concern with the counselor role being with crisis situations only?*
- *If counselors do have a role, what goal and specific outcomes would be set for counselor involvement?*
- *Using indicators from data and professional experience, what are the best ways of achieving these outcomes?*
- *What can individual counselors do to help these non-traditional students attain success?*

The guide questions reflect the research outcomes relative to the identified characteristics of successful students as defined. In order to provide a comprehensive reference, all are presented although some are more directly related to counseling than others.

Recruitment and Selection

1. *Does selection testing reflect locally determined threshold levels?*
2. *Does the selection process include counseling and/or advisement to complement high school records and test scores?*
3. *Does the selection process allow for an element of self-selection or personal choice to participate in developmental studies?*
4. *Is there sufficient flexibility in scheduling to allow change of competency level class after the initial weeks of instruction?*
5. *Is there opportunity for attention to the individual who is a member of a targeted group in developmental program?*

Diagnosis and Prescription

1. *Are valid entrance and exit measures established?*
2. *Are students and faculty aware of these competency levels or competency expectations?*
3. *What are the individual diagnosis procedures used in the developmental program?*
4. *Are appropriate staff members involved in these procedures?*
5. *Does the diagnosis process provide the inputs necessary for individual prescription?*
6. *Is there sufficient flexibility in program and schedule to allow implementation of prescription?*
7. *Is counseling and advisement a functional part of the diagnosis and prescription process?*

Programming

1. *Does the developmental program emphasize those skills indicated as areas of need by students and other staff (reading, writing, study skills, career-personal decision-making and math as appropriate)?*
2. *Is the content of skill instruction based on career and academic course requirements?*
3. *Does the developmental program have identifiable goals, objectives and outcomes?*
4. *Do the developmental offerings carry a positive connotation to students generally? To faculty?*
5. *Do developmental offerings carry credit as appropriate?*
6. *Is the scheduling of developmental offerings flexible enough so that it allows for a student voice as to participation, return, periodic requests for help and/or continuance?*
7. *Are class sizes appropriate for individualized instruction as needed?*
8. *Is the supportive service of tutoring available and managed by professional staff?*
9. *Does the institution as a whole examine its role relative to non-traditional student needs?*
10. *Does the program provide a process to allow student drop-in and drop-out after formal completion of program?*

Staffing and Facilities

1. *Do staff members have expertise in and credentials for developmental programs?*
2. *Do staff members hold rank and status in the college as well as in the developmental program?*
3. *Does scheduling allow for and encourage interaction and cooperation with other faculty and staff?*
4. *Are the physical facilities for developmental programs centralized and easily accessible to students?*
5. *Are there opportunities for staffing dual assignments, if only occasionally?*

Evaluation and Management Information System

1. *How does evaluation of developmental programs relate to division, department or college assessment?*
2. *Does a definition of program effectiveness exist in sufficient specificity to guide an evaluation effort? Are there identifiable standards for the developmental program?*
3. *What decisions need to be made or what questions are being asked about the developmental program by faculty, administration, and students?*

FOOTNOTES

[1] *Toward a Definition*, VEA #76-2-382, December 1975.

[2] *Survey of Developmental Studies Programs for Occupational Students: Reanalysis of Data*, VEA #TQ-2-526, September 1976.

[3] *Survey of Personal Values*, Leonard V. Gordon, Science Research Associates, Inc., Chicago, Illinois. 1964-1965.

Survey of Interpersonal Values, Leonard V. Gordon, Science Research Associates, Inc., Chicago, Illinois. 1960.

[4] Detailed data analysis elsewhere. See *Post-Secondary Developmental Studies Programs for Occupational Students: An Impact Study*, Research Report. VEA #TQ-2-526, September 1977.

Monograph Series: Developmental Studies for Occupational Students Post-Secondary Programs. VEA #TQ-2-526, November 1977.

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